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ABSTRACT

This study used checklist and interview methods to assess the normative development of children's social function skills. Participants included a large, cross-sectional sample of parents of normal children ranging in age from 6 months to 7.5 years. Parents completed the checklist portion of the Pediatric Evaluation of Disabilities Inventory, a measure of functional skills in the social function domain. Parents were then interviewed about the level of assistance they routinely provided the child for each skill on the checklist. Results provided the normative age ranges for acquisition of 65 social function skills used in the first 7 years of life. An analysis of the data indicated that children who made "passing" scores for skills on the checklist still received at least minimal assistance or supervision. These children were often unable to master the same skills independently until years later. It is recommended that careful attention be paid to contextual support variables in the use of checklist data on social function skills. Included are several tables of related material. Five references are appended. (GLR)

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A NORMATIVE STUDY OF DEVELOPMENT IN CONTEXT:

GROWTH TOWARD INDEPENDENCE IN SOCIAL FUNCTION SKILLS OF YOUNG CHILDREN

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ABSTRACT

Previous assessment of social function skills has often included checklist measures such as the Vineland Adaptive Behavior Scales. In this study, data from checklists of social function skills are contrasted with structured interview data on caregiver assistance levels. In a cross-sectional sample, stratified across race, educational level and urban/rural communities, parents reported on over 400 children with ages ranging from six months to seven and one-half years. Data were collected as part of the normative study for the PEDI (Pediatric Evaluation of Disabilities Inventory). Results document the contribution of parent support context to performance of children's social function skills. Differences are highlighted, for multiple social skills, in the continuum between a child's initial capacity for a skill, often supported by parents, and final independent mastery. Conclusions recommend careful attention to contextual support variables in use of checklist data on social function skills.

METHOD

Subjects

Normative data were collected by 31 trained pediatric nurse practitioners recruited from 20 clinics and medical practices in the Northeastern United States. A stratified sampling method was used to identify potential subjects so that the overall sample would be representative of the population characteristics of the United States (see Table 1 below for details). Consenting parents were asked to fill out the checklist portion of the PEDI on their child and then were interviewed to provide additional information on level of assistance. Data were typically collected in the course of a well-child visit to the facility. The present report summarizes data on 266 children between the ages of 6 months and 7.5 years. Sample size in each six-month age group ranges from 11 to 31, with a mean of 19.

Table 1

Demographic Characteristics of Sample

	US Population Percent	PEDI Sample Percent
Community Size		
Urban	61.5	72
Rural & small town	38.5	28
Race		
Caucasian	83.5	73.5
Black	11.7	21.2
Hispanic	6.5	2.6
Asian	1.6	0.5
Native American	0.7	3.1
Educational Level (Mother)		
<8th Grade	18.3	2.6
Partial High School	15.3	4.6
High School	34.6	22.2
Partial College/ Training Program	15.7	29.9
College	8.6	14.9
College +	7.6	20.6

INSTRUMENT

The PEDI (Pediatric Evaluation of Disability Inventory) was developed to provide a reliable and valid measure of functional skills in children ages 6 months to 7.5 years in the domains of Self-Care, Mobility, and Social Function. The Social Function Domain is the focus of the present report. In this domain, the PEDI samples four types of communication skills (receptive and expressive), three areas of social interaction, symbolic play, and skills in the management of daily life including time orientation, household chores, self-information, self-protection, and community function.

In Part I of the PEDI, parents respond to detailed checklists by indicating the skills their child has and has not mastered in each functional area. Within each functional skill, items are grouped in hierarchical sets of 5, from easiest to hardest. Results from preliminary Rasch analyses have confirmed the appropriateness of skill item ordering.

In Part II, the level of support, monitoring, or direction parents routinely provide for each skill is rated using detailed probes during a structured interview with the caregiver. Six levels of caregiver assistance are possible, ranging from total assistance, where parents complete the task for the child, to independence, where children perform the function without parental support.

SAMPLE ITEMS

Part I: Functional Skills Checklist

Check all levels that the child can usually do.

PROBLEM RESOLUTION:

- o **Tries to show you the problem and communicate what is needed to help the problem.** _____
- o **If upset because of a problem, child must be helped immediately or behavior deteriorates.** _____
- o **If upset because of a problem, child can seek help and wait if it is delayed a short time.** _____
- o **In ordinary situations child can describe the problem and his or her feelings with some detail; this usually occurs in place of child acting out frustration.** _____
- o **Faced with an ordinary problem, child can join adult in working out a solution..** _____

Part II: Caregiver Assistance Interview

JOINT PROBLEM SOLVING:

When an ordinary problem or conflict arises, can you generally count on the child to tell you clearly what the problem is, offer reasonable solutions and/or negotiate with you until an acceptable compromise is reached? "Ordinary problems" include things like disagreement over choice of clothes or activity, a lost toy, a problem involving another adult, etc.

0. **Total Assistance: Caregiver must identify and find solutions for ALMOST ALL problems; child does not effectively communicate problems or participate in solutions.**

1. **Maximal Assistance: Caregiver must VERY FREQUENTLY direct child to help identify problem; child can provide information about problem in response to caregiver prompts.**

2. **Moderate Assistance: Caregiver must FREQUENTLY direct problem-solving effort; child can communicate effectively about most simple problems but needs help identifying solutions.**

3. **Minimal Assistance: Caregiver OCCASIONALLY needs to provide direction to solve difficult problems; child can communicate about simple problems and generate solutions almost all of the time.**

4. **Prompting/Setup: Caregiver may need to give some PROMPTING or CUING when child is problem-solving with people other than caregiver.**

5. **Independent: Caregiver and child can work cooperatively to solve difficult problems; child effectively initiates and participates in problem-solving.**

Legend: Normative Data Bar Chart

- Left side of bar indicates youngest end of six month age range within which 10% of subjects pass the given skill
- Right side of bar indicates older end of six month age range within which 90% of subjects pass
- 50% of all subjects have passed the skill by the age indicated at the dividing line within the bar

* Asterisk indicates a skill passed at the 50% and 90% level by subjects within the same six month age range

Bars which extend beyond age 7.5 reference skills not yet mastered by 90% of subjects by age 7.5

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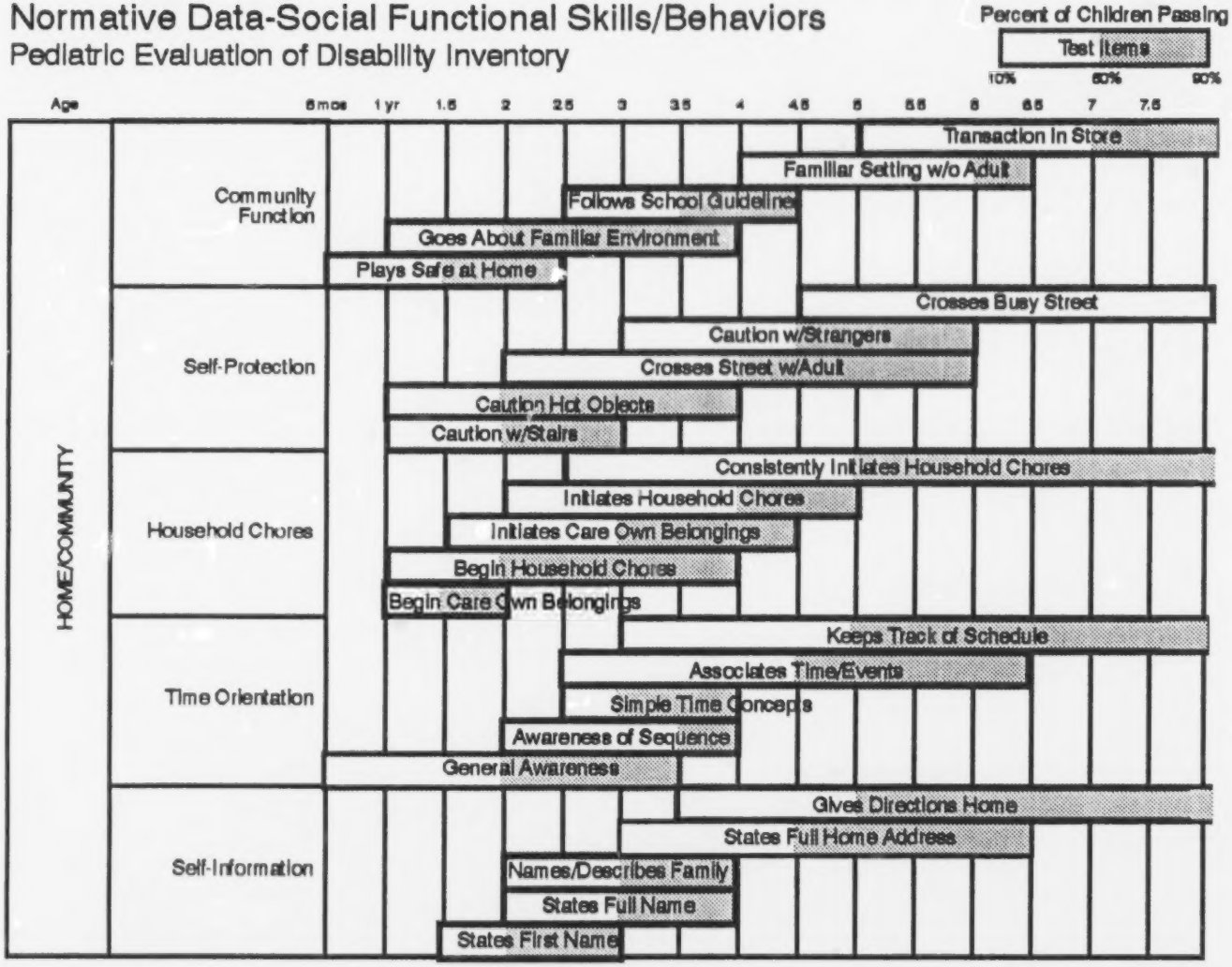
Normative Data-Social Functional Skills/Behaviors

Pediatric Evaluation of Disability Inventory



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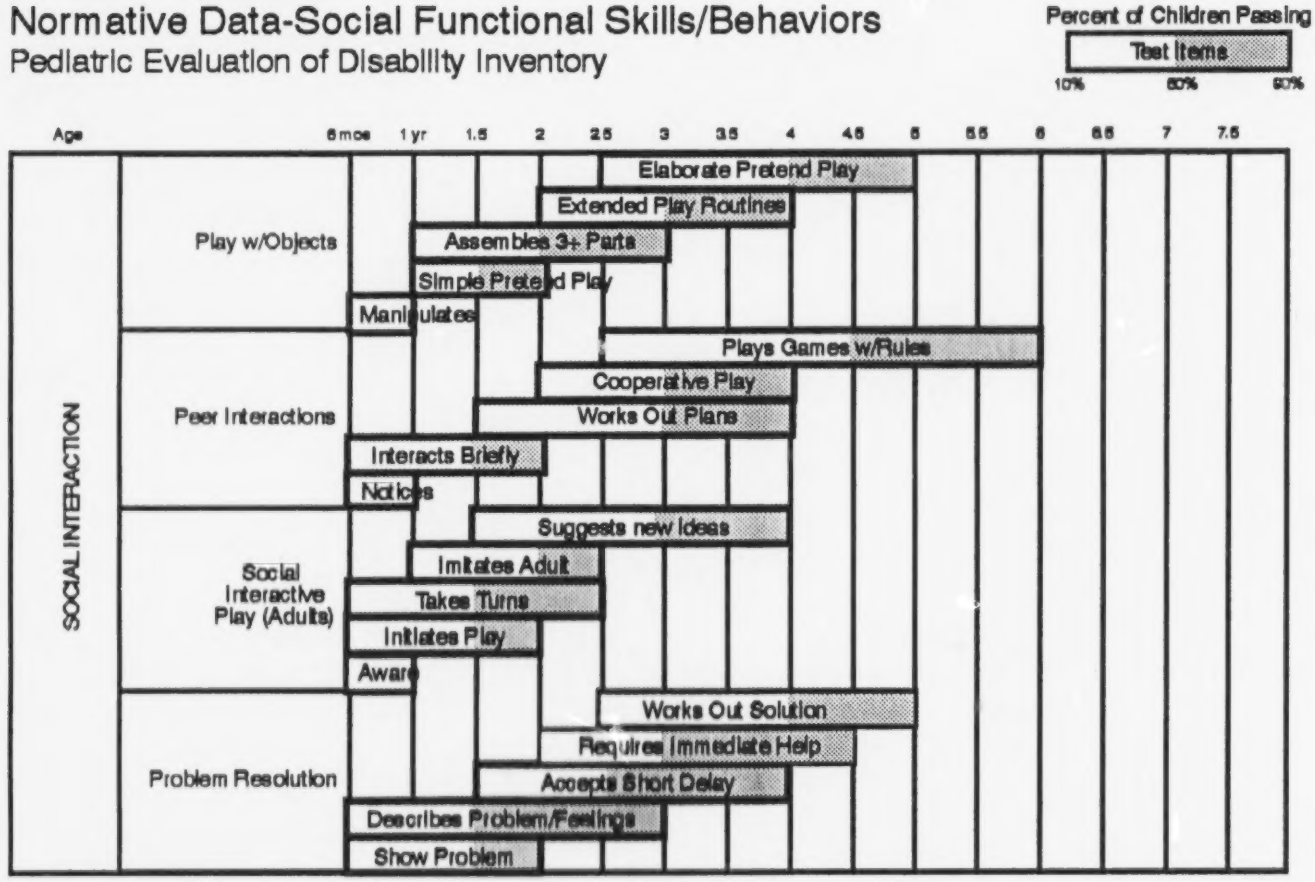

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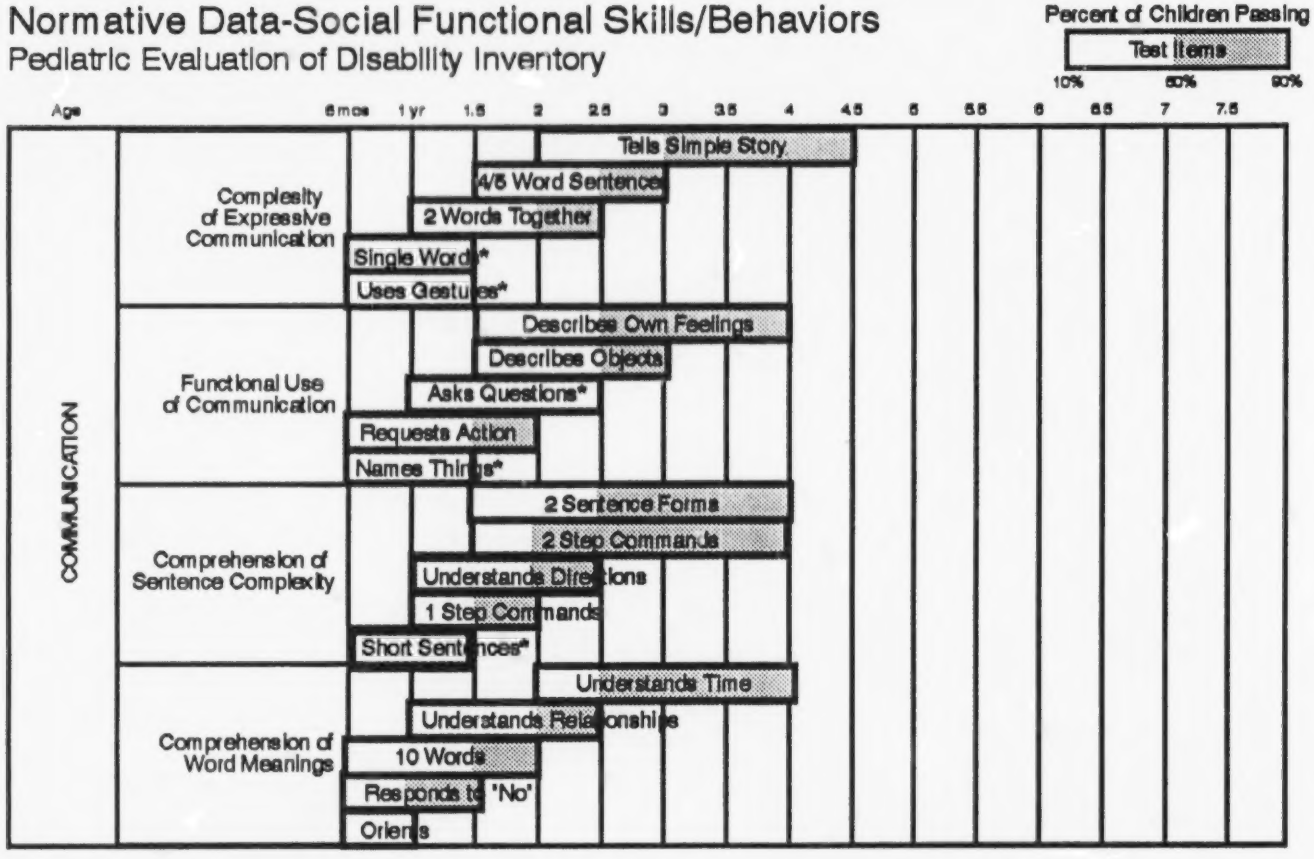
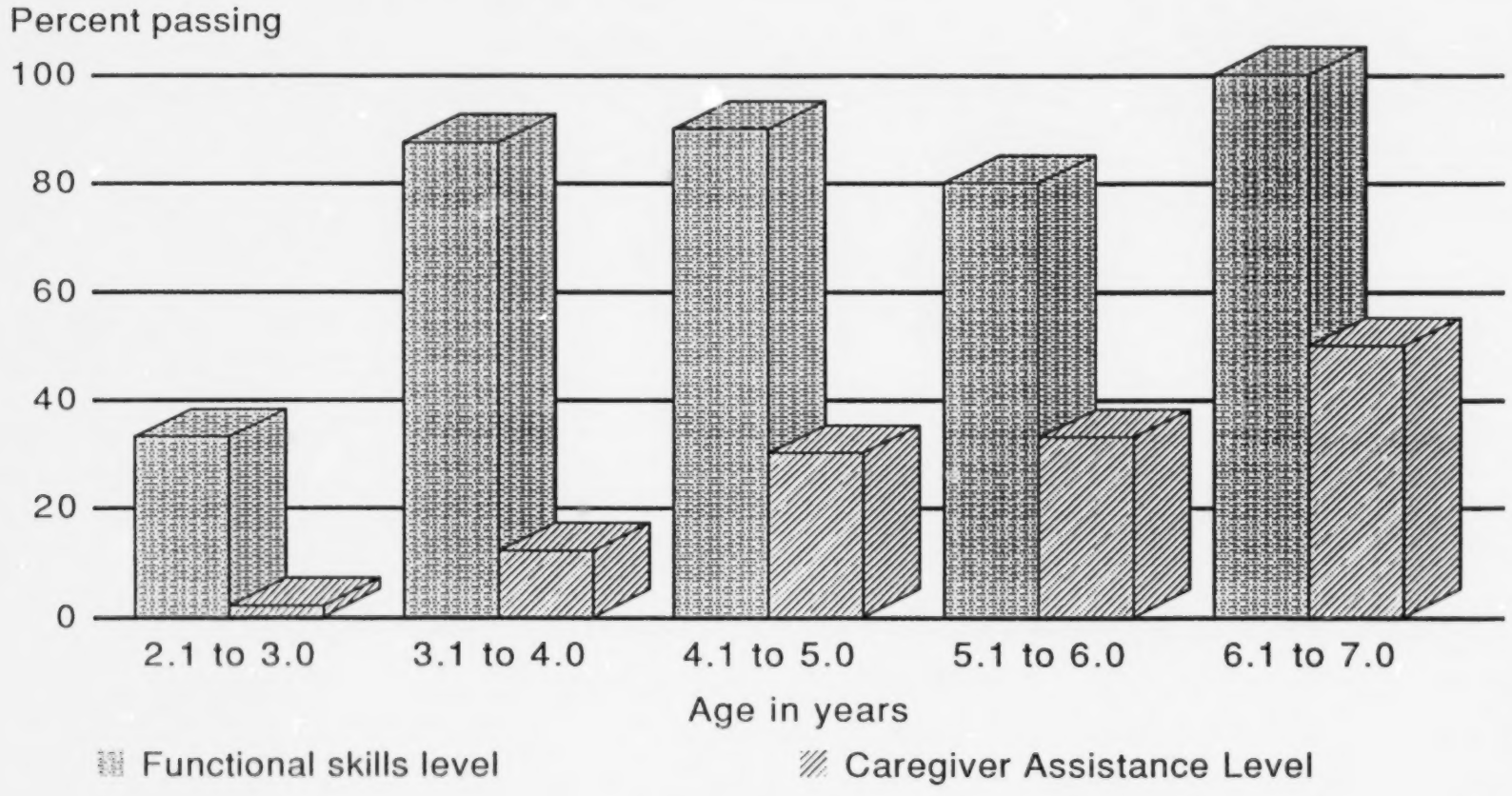
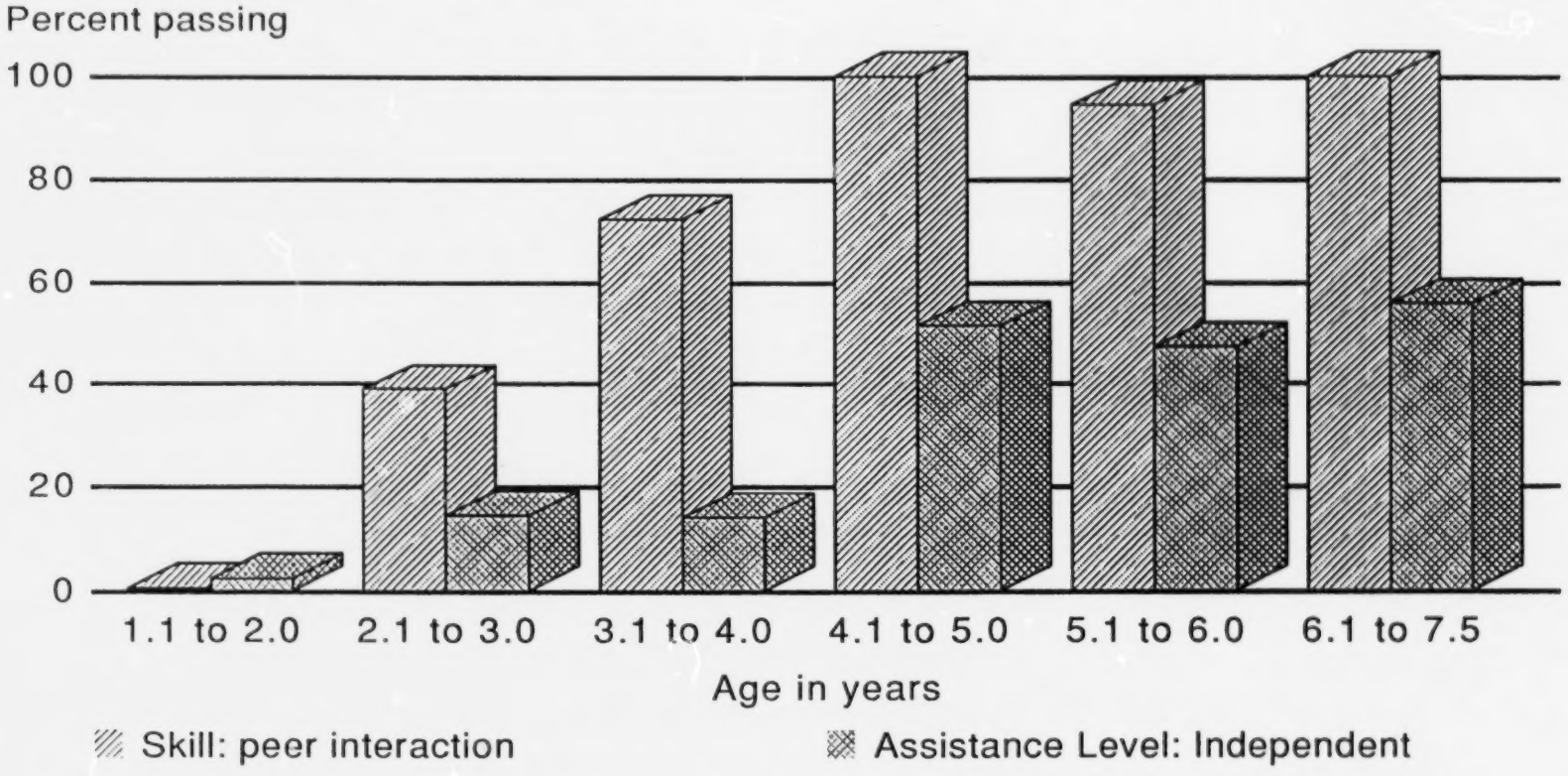


Joint Problem Solving



Peer Play

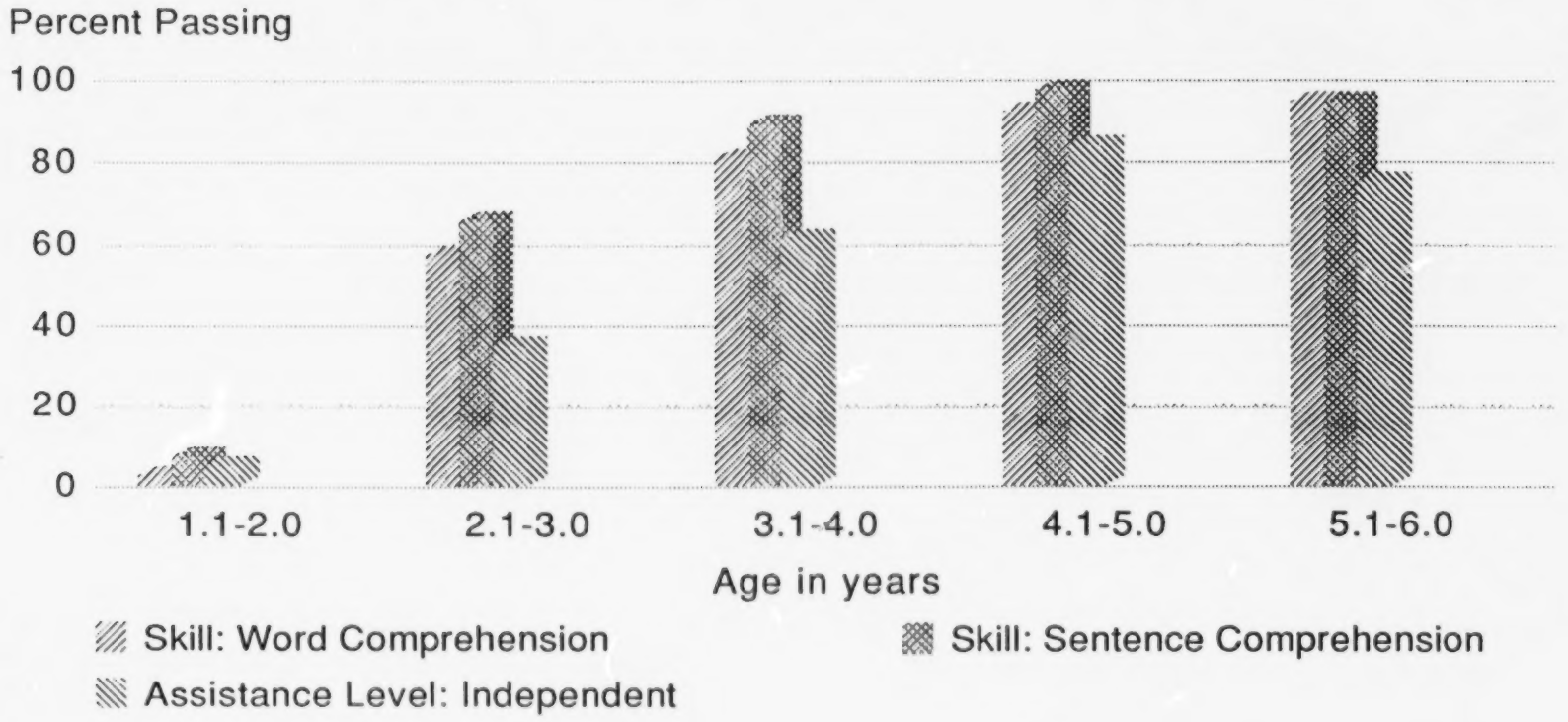
Child's ability to plan and carry out joint activities



Functional Communication: Comprehension

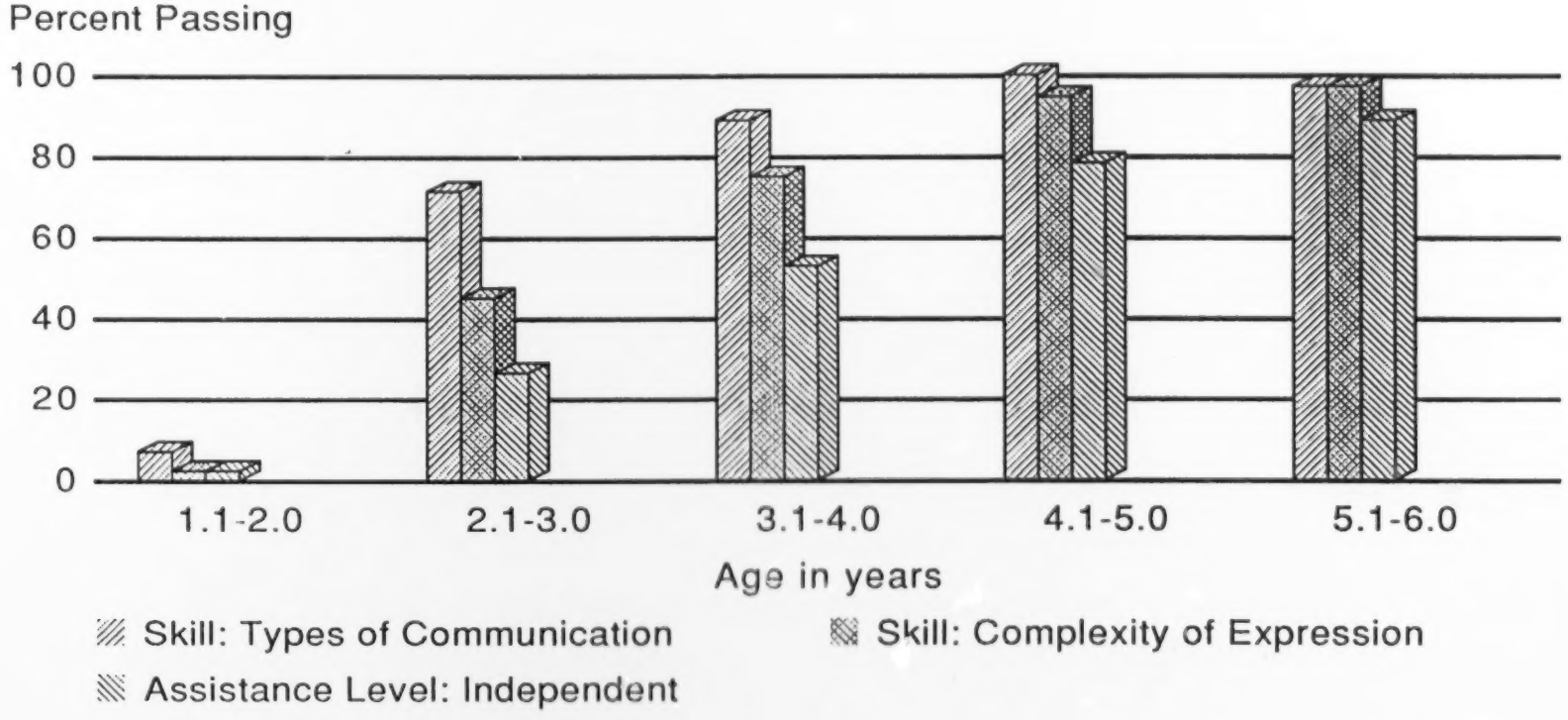
Child's understanding of words or sentences

- **As applied to understanding of requests and instructions**



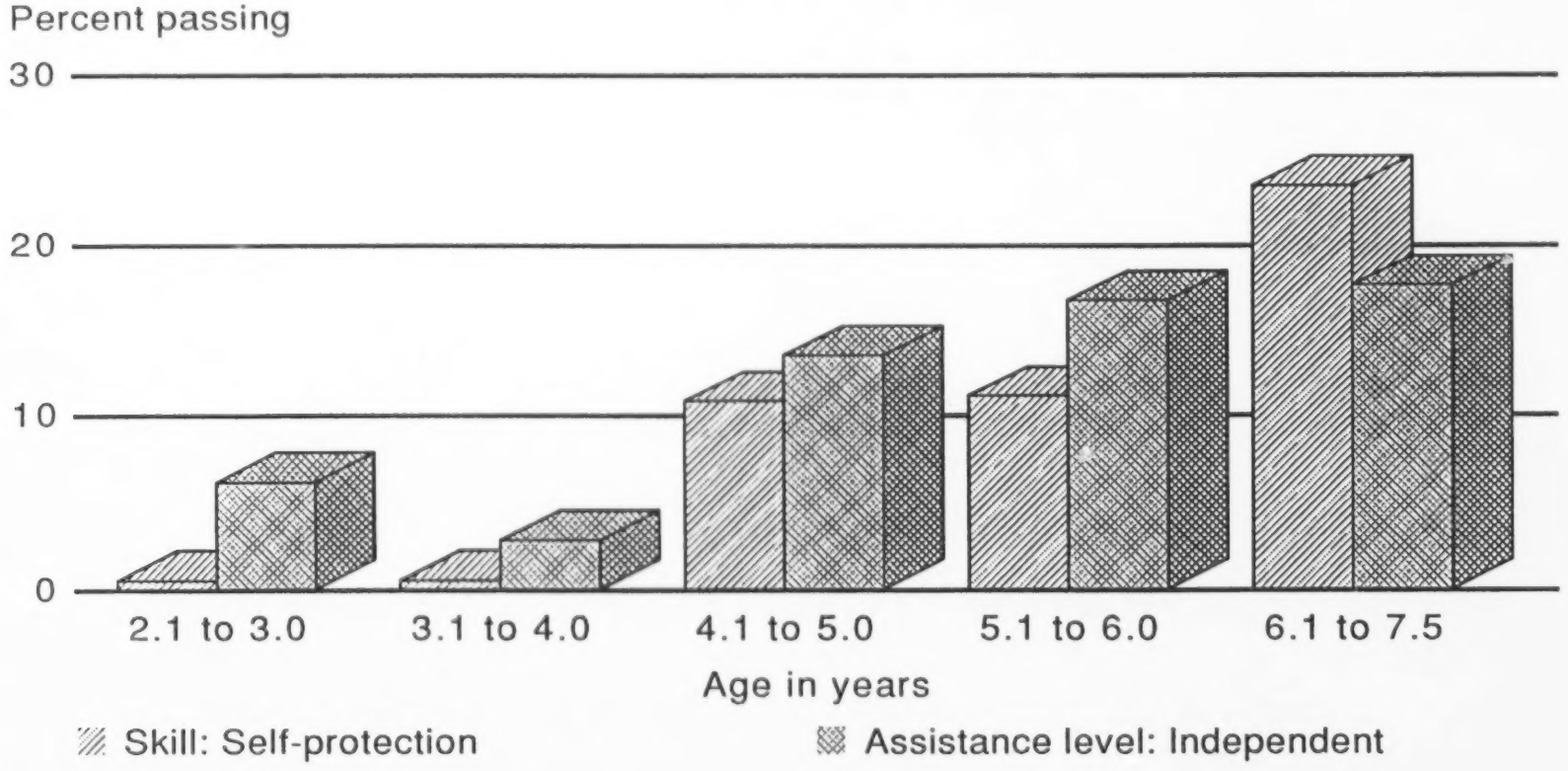
Functional Communication: Expression

Child's ability to provide information



Safety

Child's Safety Behavior in Routine Situations



SUMMARY

Normative development of a wide range of social function skills was assessed using checklist and interview methods sampling a large cross-section of parents of normal children ranging in age from six months to seven and one half years of age. Results provide description of normative age ranges for acquisition of sixty five social function skills in the first seven years of life. An analysis of normative checklist data, reporting functional skill level, in comparison with interview data indicating interactional level, (or level of caregiver assistance required to complete the same skills) provides evidence that checks indicating a "pass" on a skill are often provided well before a child masters that skill to a point independent of caregiver assistance. Data from the structured interview indicate that children described as passing skills on the checklist are still receiving at least minimal assistance or supervision, and are often unable to complete the same skill independently until years later. Functional measures such as the Denver Developmental Screening Test or the Vineland Adaptive Behavior Scales may be inaccurate or misinterpreted to the extent that typical contextual support for social function is ignored. Caution is urged in interpretation of checklist data on social functions which have not been placed into context with the contextual support typically used to accomplish particular skills.

Data on social function was gathered as part of the normative study supporting standardization of a new functional skills instrument called the PEDI: Pediatric Evaluation of Disability Inventory, which assesses basic life skills in the domains of self-care and mobility as well as social function. The life skills sampled included four types of communication skills, both receptive and expressive, three areas of social interaction, symbolic play, and skills in management of daily life, including time orientation, household chores, self-information, self protection and community function. The content, reliability and validity studies for this instrument are in progress or reported elsewhere (Haley & Baryza, 1990; Feldman, Haley, & Coryell, 1990). Future plans for research with this instrument include documentation of the normative path for development of these functional skills among children sharing a given clinical diagnosis, such as spina bifida, cerebral palsy, or traumatic brain injury.

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